

### ABSTRACT

Nematodes, such as *Caenorhabditis elegans*, that express mutant and wild-type orthologs of human genes involved in polycystic kidney diseases (PKDs), are used to study the functions of the proteins encoded by the genes, to screen for other genes involved in the diseases, to identify mutations involved in the diseases, and to screen for drugs that affect PKD. Behaviors controlled by the action of the genes or gene products are identified and used in the assays. Hence an animal model is provided that permits study of the etiology of polycystic kidney disease and provides a tool to identify the genes involved in the disease pathway, and to identify compounds that may be used to treat or alter the disease progression, lessen its severity or ameliorate symptoms. The nematode genes that encode protein products, mutants of the genes, vectors contain the genes and mutant genes and nematode strains that contain the vectors are also provided.

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